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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Brian John Cragun et al.
Serial No.: 09/004,034
Filed: January 7, 1998
For: AUTOMATIC SALES PROMOTION SELECTION SYSTEM AND METHOD

Art Unit: 2163
Examiner: Eric W. Stamper
Atty. Docket No.: IBM/33B

W/stecl
3/26/01 **REPLY BRIEF**

TM Assistant Commissioner for Patents
ATTENTION: Board of Patent Appeals and Interferences
Washington, D.C. 20231

This Reply Brief is timely submitted within two months from the date of the Examiner's Answer dated December 21, 2000. The purpose of this Reply Brief is to briefly address an apparent misconception on the Examiner's part with respect to the concept of "adapting the response" of a purchase advisor neural network based upon customer data.

Applicants have argued that a *prima facie* case of obviousness does not exist because the primary reference to Deaton et al. discloses a purely static sales promotion system that over time will generate the same response to any given set of data, and because there is no suggestion in the prior art of the desirability of adapting the response of the system based upon customer data to improve performance. The Examiner, on the other hand, counters that a general motivation exists from the known adaptability of neural networks.

However, it should be noted that Applicants' claims specifically address adapting the response of a purchase advisor neural network based upon customer data. Therefore, merely asserting that it is known to adapt the response of a neural network is insufficient to support the conclusion that one of ordinary skill in the art would appreciate the desirability of modifying Deaton et al. to have a response that is adaptable based upon customer data. In fact, were the Examiner's broad allegation of motivation found to be sufficient to support an obviousness

rejection, the rejection would become nothing more than a “gist of the invention”-type rejection, since important limitations would essentially be read out of the claims.

Further, given that the general adaptability of neural networks is not by itself sufficient to establish the motivation necessary to modify Deaton et al., the Examiner must look elsewhere to establish sufficient motivation to sustain the rejection.

Apparently, the Examiner relies on Deaton et al. to further support the rejection, stating that “Deaton et al. clearly discloses storing a shopping history and at least offering promotional incentives (coupons, discounts, etc.) based on the previous shopping history.” Examiner’s Answer, page 5. As Applicants have noted throughout prosecution, however, simply varying the promotional incentives based upon shopping history is *not* analogous to adapting system response.

Applicants respectively submit that Deaton et al. merely discloses a system that relies on static rules that output different results based upon different input data. In the case of Deaton et al., shopping history is a part of the input data; however, the underlying rules do not change.

To further clarify this distinction, consider an example rule that could be implemented in a static system such as Deaton et al., where the rule is to suggest a coupon *A* if a customer has bought 10 or more of a particular type of item within the last month, otherwise, suggest coupon *B*. Thus, suppose at time 1, a customer had bought 8 items in the last month. A static system would suggest coupon *B*. Then, at time 2, if the customer purchased 12 items, coupon *A* would be suggested. It is important to note, however, that while the shopping history for the customer (the number of items bought) changed from time 1 to time 2, and the output of the system changed, the underlying rule (response) still stayed the same.

Contrast this with an embodiment based upon Applicants’ claimed adaptable system. If the same rule was present at time 1, and a customer had bought 8 items in the last month, coupon *B* would again be suggested. However, if between time 1 and time 2, the rule was changed to suggest coupon *A* if a customer has bought 15 or more of the item (e.g., based upon the success of promotions directed at other customers), at time 2, if the customer had again purchased 12

items, coupon B would still be suggested – the response that would be expected at time 2 was changed from what it was at time 1.

Therefore, Applicants respectfully submit that the response of Deaton et al. is in fact static, contrary to the Examiner's assertions. As a consequence, the Examiner has still failed to establish the motivation necessary to support the rejections.

As a final matter, Applicants have separately addressed claims 4, 12 and 39, which address the concept of adapting the memberships of groups responsive to customer data. The Examiner's assertions at page 9 of the Examiner's Answer with regard to motivation are even more tenuous than with the other claims. Nothing in the prior art of record suggests changing group memberships based upon customer data, and the mere assertion that the adaptability of neural networks suggests this claimed feature essentially reads this feature out of the claims.

Applicants therefore respectfully submit that the Examiner has failed to sustain the burden of establishing a *prima facie* case of obviousness as to any of the pending claims. Accordingly, reversal of the Examiner's rejections is respectfully requested.

If there are any questions regarding the foregoing, please contact the undersigned at 513/241-2324. Moreover, if any other charges or credits are necessary to complete this communication, please apply them to Deposit Account 23-3000.

Respectfully submitted,

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